

Bladder Tumors in Women, What about Our Context?

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Bladder cancer ranks 7th among all cancers, with smoking as the main risk. It is the second urologic cancer after prostate cancer. Their incidence is increasing by about 1% per year, with a greater incidence in women than in men. In nearly 70% of cases, bladder cancer is of the non-muscle-infiltrating type. Although they are less frequent in women, they present some very particular characteristics.

Objective: To analyze and describe the epidemiological, clinical, anatomopathological, and therapeutic manifestations in women. Patients and methods: Thirty-four (34) files were retrospectively analyzed over 5 years (March 2011 and December 2015).

Results: The mean age was 58.1 years with a mean delay of consultation of 14 months. Hematuria was the most frequent symptom (95%). Non-infiltrating tumors were in the majority (in 20 cases), followed by infiltrating tumors (14 cases), urothelial carcinoma was the only histological type observed. Eighteen(18) patients had shown improvement from BCG instillations and anterior pelvectomy had been performed in 2 cases, and 6 cases respectively for NIMV and IMV. Sexual life was disrupted in 37.5% and 33.33% of cases of Bricker and neovessia. The recurrence and

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progression rates were 25 and 15% respectively.
Conclusion: Bladder tumors in women are less frequent, their treatment is based either on immunotherapy or surgery or multimodal. Strict surveillance is mandatory because the evolution of these tumors is unpredictable.

Keywords: Bladder tumor; BCG; anterior pelvectomy; radiochemotherapy.

1. INTRODUCTION

Bladder cancer ranks 7th among all cancers and mainly affects an elderly population with smoking as the main risk factor. It is the second most common urologic cancer after prostate cancer. Bladder tumors are responsible for 3% of cancer deaths. Their incidence is increasing by about 1% per year, with a greater increase in women than in men [1-2]. The diagnosis is usually made following hematuria, or more rarely, bladder overactivity or pelvic pain, and is guided by ultrasound and confirmed by histology after trans-urethral resection of the bladder. Although they are less frequent in women, they present certain characteristics. Our work aims to analyze and describe the epidemiological, clinical, anatomopathological, and therapeutic particularities in women.

2. PATIENTS AND METHODS

This is a retrospective study, carried out on the utilization of 34 records of patients diagnosed with bladder tumors, in the department of urology of the CHU Ibn Rochd of Casablanca over a period of 5 years (from March 2011 to December 2015). were included all patients whose records were complete and we excluded all those whose records were unexploitable (16 cases). Data were collected using a collection form and the following parameters were studied: epidemiological, clinical, paraclinical, therapeutic, and evolutionary. Any endoscopic or surgical

procedure performed on the urinary tract was done with a sterile CBEU. Concerning the evaluation of the postoperative status, we used the Clavien-Dindo intermittent classification of 2009, to assess the rate of post-cystectomy complications in the short and mid-term. Data analysis was done by Epi info.7 software, ki2 test was used to compare the with a significant threshold <5%.

3. RESULTS

3.1 Frequency

In five years, 50 cases of bladder tumors were reported in women or 10 cases per year.

3.2 Age

The mean age was 58.1 years within extremes of 24 and 80 years. Fig. 1 shows the distribution of patients according to age.

3.3 Risk Factors

The concept of chronic smoking was noted, it was active and passive respectively in 2.94% and 11.76% of cases. No occupational exposure or exposure to infectious agents was noted. Four patients were diabetic (with a metabolic syndrome).

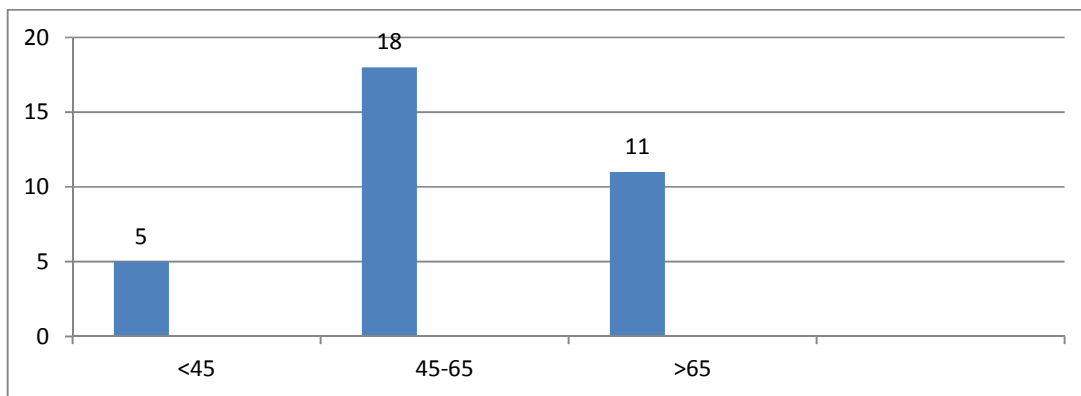


Fig. 1. Age distribution of patients (N=34)

Table 1. Distribution of patients according to symptoms and clinical examination data

	n	%
Hematuria	32	94,12
irritative signs-hematuria	28	82,35
Low back pain - Hematuria	7	20,60
Dysuria-Hematuria	4	11,76
urine retention-hematuria	1	2,94
pelvic pain-hematuria	1	2,94
pelvic mass-hematuria	1	2,94
Sterility-Hematuria	1	2,94
Alteration of the general condition	3	8,82
Indurated bladder base	12	35,29
Normal clinical examination	3	8,82

3.4 Clinic

3.4.1 Circumstances of discovery

Hematuria was the main finding in 94.12% of cases (Table 1)

3.4.2 Time to consultation

The delay between the onset of symptoms and the consultation varied between 1 month and 3 years with an average of 14 months.

3.5 Paraclinical

3.5.1 Biological work-up

Anemia was found in 50% of cases. E. coli was predominant in 45.45% of cases, followed by

Klebsiella pneumonia (27.27% of cases), Enterobacter species (18.18% of cases), and Streptococcus (9.1% of cases) on the initial CBEU samples. Malignant urothelial cells were found in 3 patients and dysplastic cells in one patient on urine cytology (see Table 2).

3.5.2 Suprapubic ultrasound

It was performed in 33 patients (97.06%). The impact on the upper urinary tract was noted in 12 patients (36.36% of cases), hydroureteronephrosis was bilateral in 9 cases and unilateral in 3 cases. Four patients had a reduced cortical thickness index. The location of the tumor was specified in 22 patients with a predominance of the posterolateral walls.

Table 2. Distribution of patients according to the biological work-up

	n	%
Anemia	17	50
ECBU	34	100
Sterile	20	58,82
Leucocyturia without germ	3	8,82
Urinary tract infection	11	32,36
Renal failure	4	11,76
Urine cytology	7	20,6
Negative	3	42,86
Positive	4	57,14

Table 3. Distribution of patients according to the results of the suprapubic ultrasound

	n	%
Normal	1	3,03
Blood clot	1	3,03
Irregular wall	1	3,03
tumor	30	90,91
Tumor		
Single	25	83,33
multiple	5	16,67

3.5.3 Endoscopy and bladder resection

Cystoscopy was performed in all our patients (Table 4) Spinal anesthesia was used more than GA and sedation, respectively in 70.59%, 20.59%, and 8.82% of cases.

3.6 Histology

All tumors were urothelial carcinomas. A squamous cell component was associated in one case. Non-infiltrative tumors were in the majority (Fig. 2). Grades I, II, and III were noted in 20.6%, 41.17%, and 38.23% of cases, respectively, in noninfiltrating tumors.

3.7 Extension Workup

3.7.1 Pelvic touch

Combined with abdominal palpation, they showed infiltration of the bladder base in 13 cases (38.23%) and the peripheral lymph nodes were normal in all cases.

3.7.2 Thoracoabdominal CT scan and/or Uroscanner

It was performed in 17 patients and noted an in-site invasion in 12 cases (Table 5). The impact on the upper urinary tract was noted in 17.65% of cases.

3.8 Treatment

3.8.1 Non-muscle infiltrating tumors

Of the 34 cases of bladder tumors studied, 20 were NMITTs: 2 CIS, 10 PTa, and 8 PT1, and all had been completely resected. Eighteen patients had received BCG with 6 courses and one year of maintenance treatment. No adverse events were found.

Anterior pelvectomy was performed in 2 for high-grade multifocal pT1 not controlled by TURBT.

3.9 Invasive tumors

3.9.1 Surgery

Laparoscopic was performed in 6 cases for pT2 (Table 6). In only one case was laparoscopy converted to laparotomy. The lymph node dissection courage was performed in all cases. Surgery was preceded by neoadjuvant

chemotherapy in two patients using the MVAC protocol (3 courses).

urinary diversion -Bricker-type- was performed in 7 cases and Bladder Augmentation in one case. No intraoperative complications were noted and only one patient was transfused. No perioperative deaths were observed.

Surgical revision was performed in only one case for urinary peritonitis at D1 postoperatively; paralytic ileus was noted in only one case and also parietal suppuration. The postoperative results are shown in Table 7.

3.10 Chemotherapy-Radiotherapy

Radiation therapy was performed in 8 cases as part of the multimodal treatment (pT2: 6 cases for refusal of cystectomy and 2 cases for metastases with epidermoid inflection) with Cisplatin and 40GY on average.

3.10.1 Post cystectomy histology

Urothelial carcinoma was the only histological type found on the operative parts (Table 8).

3.10.2 Post cystectomy histology

Urothelial carcinoma was the only histological type found on the operative parts (Table 8).

3.11 Evolution

Six patients were lost to follow-up, including 3 NMITVs (pTaGII, pTaGIII, and pT1GIII) and 3 IMITVs (one pT2bGII and two pT2GIII), after a well-conducted BCG treatment for NMITVs and multimodal treatment for IMITVs after an average of 2 years.

Eleven patients with TVNIM had a normal endoscopic control after a 4-year follow-up (namely: 3 pTaGI, 4 pTaGII, 2 pT1GI, and 2 pT1GII) and recurrence was noted in 7 cases (35% of TVNIM).

All recurrences were NMITVs (3 pTaGI, 2 pTaGII, and 2 pT1GII) and their treatment was BCG (intermediate risk: induction with maintenance treatment for 1 year; high risk: induction with maintenance for 3 years). The progression rate was 15%.

11 patients with IMRT were followed up correctly for an average of 2 years, namely:

- two patients who had received multimodal treatment were well;

- two episodes of acute retention of urine related to the intestinal mucus plug, noted in the patient who had benefited from a neo-vessel, they had required a bladder catheterization;
- two patients out of 7 who had a BRICKER type shunt, had presented acute pyelonephritis (treated with C3G) and the other five were well one patient (with hepatic and pleural metastasis) had died at 6 months of follow-up.

Table 4. Distribution of patients according to bladder endoscopy

	n	%	
siege	trigonal	8	23,53
	Retro-trigonal	8	23,53
	Side face	13	38,23
	dome	2	5,88
	Whole bladder	6	17,65
	Bladder neck	8	23,53
	Ureteral meats	11	32,35
Number	single	24	70,59
	multiple	10	29,41
size	<1cm	10	29,41
	1-3cm	15	44,12
	>3cm	9	26,47
resection	Complete	27	79,41
	Incomplete	6	17,65
ASA	biopsy	1	2,94
	1	18	52,94
	2	14	41,18
	3	2	5,88

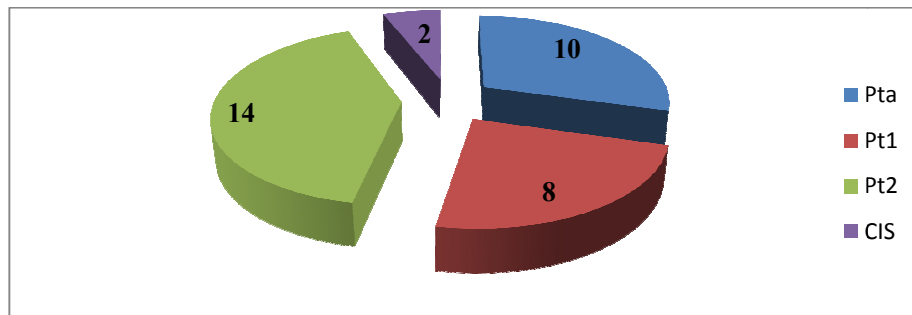


Fig. 2. Distribution of patients according to tumor stage

Table 5. Distribution of patients according to extension work-up

Degré d'extension de la tumeur	n	%	
locoregional	Perivesical fat	12	70,6
	Uterus	3	17,65
	Parameters	2	11,76
	Vagina	2	11,76
	Rectum	2	11,76
	Ureteral meatus	2	11,76
Visceral metastases	Right adrenal, diaphragm, hepatic	1	5,88
	Hepatic and pleural bilateral	1	5,88
Lymph node metastases	Ilio-obturator	3	17,65
	Hypogastric	2	11,76
	Lumbo-aortic	1	5,88
	Left sub hilar pulmonary	1	5,88

Table 6. Distribution of patients according to surgical characteristics

Type of surgery		Duration of intervention (mn)		Average intervention time according to bypass (min)		Blood loss (ml)	Time between resection and surgery (months)	
Coelioscopy	laparotomy	Laparotomy	coelioscopy	Bricker	Entérocystoplastie		<3	>3
n 6	2	401±60	250±90	180	300	378±250	3	5

Table 7. Distribution of patients according to final histological findings

Transfused patients		Complications			Post-operative hospital stay (days)	Average time to take back drinks (days)	Average time to resume feeding (days)	Average time to resume transit
		GI	GII	GIII				
n 3	3	1	1	1	10,0±3,0	2,4±1,6	5±1,1	3,6±1,4

Table 8. Distribution of patients according to final histological findings

		n=8
Tumor stage	pTa low grade	1
	pT1 low grade	1
	pTis + pT2	1
	pT2	4
	pT3a	1
Lymph node involvement	pN0	7
	pN≥1	1
Resection margins	R0	8
	R1	0
Histolog	Urothelial carcinoma	8
	other	0

4. DISCUSSION

4.1 Incidence

Bladder cancer ranks fourth in incidence and seventh in death for all cancers combined [1]. It represents 67.3% of urinary tract cancers [3].

This low frequency of bladder cancer can be explained by low rates of risk factors such as smoking, this is due to the mores related to the Islamic religion, which occupies an important place in Morocco.

4.2 Age

Our study noted a mean age of 58.1 years, much younger than that of some Western studies, with 52.94% of patients between 45-65 years of age. Our results are similar to those in the literature [4-6]. The age of our patients was slightly younger; young age at the time of discovery of an infiltrating tumor appears to be a negative prognostic factor [7].

4.3 Circumstances of Discovery

The main reason for consultation was hematuria in 94.12% of cases, followed by irritative signs. Our results corroborate those of many authors [8-10]. The average delay of consultation was 14 months, this delay is related to the fact that all symptoms were often mistaken for cystitis.

4.4 Paraclinical

4.4.1 Suprapubic ultrasound

It had suspected a tumor in 93.94% of cases; our results are similar to the literature, as its sensitivity is 72-95% for polypoid type tumors ≥ 5 mm, compared with 20% for tumors < 5 mm [11].

4.4.2 Cystoscopy

Cystoscopy had identified the tumor in all our patients. It is indicated in case of suspicion of bladder tumor when ultrasound is negative. Its sensitivity is then 71% and its specificity 72% [8].

4.5 Histology

The histological type noted in our study was essentially urothelial carcinoma, our results are comparable to those of the literature [4,12-13]. For most of our patients, there was a clear discrepancy between the preoperative and postoperative tumor stages.

Indeed, it is now accepted that trans-urethral bladder resection is a disappointing means of assessing tumor infiltration [14-15].

4.6 Treatment

Immunotherapy with BCG vaccine was done in 10 patients without side effects, the absence of side effects could be explained by the sample size, with a recurrence rate of 35%. This recurrence rate may be related to the equally significant numbers of high-grade tumors and tumors larger than 3 cm.

Neoadjuvant chemotherapy had been administered in two patients with T2 tumors. This low rate of neoadjuvant chemotherapy is due to the fact that during the study period, this type of chemotherapy was still debated in practice. However, it is desirable before cystectomy, in order to eradicate micrometastases and avoid implantation of circulating tumor cells at the time of surgery, to reduce the size of the tumor and facilitate the surgical procedure, and to prolong patient survival [16].

The Bricker was, in our series, the most commonly used shunt. Bladder replacement was performed in very few cases because our patients presented locally advanced forms.

Laparoscopic cystectomy was the majority in our series. By finer and more precise gestures, laparoscopy also allows a better realization of hemostasis thus ensuring minimal blood loss. The average blood loss reported in our series is lower than that reported in series of radical cystectomy by laparotomy [17,18].

The intraoperative mortality was zero in our series, currently, it is between 1-4% in several studies [19-20]. This is related to the progress in anesthesia-resuscitation and surgical techniques.

Few complications were noted in our study, among which one case of paralytic ileus, parietal suppuration, and one case of urinary peritonitis. Paralytic ileus is a frequent complication after cystectomy and a common cause of prolonged hospitalization. It is favored by the use of analgesics, anesthesia, intraoperative bowel manipulation, and peritoneal inflammation created by the surgical procedure [21]. Our rate is in the lower limit of those reported in the literature [22]. Indeed, laparoscopy allows decreasing prolonged ileus by limiting the manipulation of the digestive tract and the postoperative intake of morphine [17].

5. CONCLUSION

Bladder tumors in women are less frequent than in men and often of late-onset. Smoking is an important factor in the occurrence of these tumors but it is less pronounced in the past years, however, at present, its responsibility is increasing due to female smoking. In the case of superficial tumors, treatment is based on endoscopic resection associated with intravesical instillations. For tumors infiltrating the muscle, radiochemotherapy is an alternative in cases refusing surgery or whose general condition does not allow surgery. For the other cases, anterior pelvicotomy is the reference procedure, which remains a heavy operation with a high risk of bleeding. Strict surveillance is mandatory because the evolution of these tumors is unpredictable.

CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Rouprêt M, Neuzillet Y, Masson-Lecomte A, Colin P, Compérat E, et al. Recommandations en onco-urologie 2016-2018 du CCAFU : Tumeurs de la vessie ; Prog Urol 2016 ; 27 :1 S67-S92
2. Chopin D, Gattegno B. Épidémiologie descriptive des tumeurs superficielles de la vessie. Prog Urol 2001;5:953–60.
3. Al hilal M. Etude Epidémiologique du cancer (malades de l'INO entre 1985-2002).le cancer au Maroc 2005,5.
4. Arnulf Stenzl , Lorenz Holtl: Orthotopic bladder reconstruction in women-what we have learned over the last decade. Oncol Hematol, 2003;47:147-154
5. Petriconi R, Kleinschmidt K, Flohr P, Paiss T, Hautmann R. Ileal neobladder with anastomosis to the female urethra.Urol. A. 1996 ;35(4):284-90.
6. Luciano JN, Fernando G, Marcos F. Dall'oglio, Adriano J. N.Experience with the orthotopic ileal neobladder in women: a mid-term follow-up. Bju international 2005 ; 95 :1045–104.
7. Aboutaieb R, Dakir M, Sarf I, Meziane F, Benjelloun S. Les tumeurs de vessie chez le jeune. Prog Urol 1998;8:43–6.
8. Pfister C, Roupert M, Neuzillet Y, Larre S, Pignot G, Quintens H, et al. Recommandations en onco-urologie 2013 du CCAFU : Tumeurs de la vessie. Prog Urol. 2013;23:S105-25.
9. Irani Jacques. Tumeurs urothéliales. Progrès en Urologie 2004 ;14 :957-96.
10. Dobbs RW, Hugar LA, Revenig LM, Al-Qassab S, Petros JA, Ritenour CW, et al. Incidence and clinical characteristics of lower urinary tract symptoms as a presenting symptom for patients with newly diagnosed bladder cancer. Int Braz J Urol 2014; 40:198-203.
11. Hafeez S , Huddart R. Advances in bladder cancer imaging. BMC Med 2013; 11:104.

12. Benchekroun A, El Alj H , Essayegh H, Iken A, Nouini Y, Lachkar A, et al. Tumeurs infiltrantes de vessie : étude rétrospective à propos de 225 cas. Ann Urol 2003 ;37 :279–283
13. Vuichoud C, et al. La dérivation cutanée continente après cystectomie pour cancer, une alternative fiable ? Étude rétrospective monocentrique. Prog Urol ; 2016.
14. Zerbib M, Slama J, Coloby P, Bouchot O. La cystectomie totale: techniques chirurgicales. Prog Urol 2002;12: 833-56.
15. Lerner SP, Skinner DG, Lieskovsky YG, Boyd SD, Groshen SL. The rationale for en bloc pelvic lymph node dissection for bladder cancer patients with nodal metastases: long-term results. J Urol 1993; 149: 758-64.
16. Alfred WJ, Leuret T, Comperat EM, Cowan NC, De Santis M, Bruins HM, et al. Updated 2016 EAU Guidelines on Muscle invasive and Metastatic Bladder Cancer. Eur Urol ; 2016.
17. Guillotreau J, Gamé X, Mouzin M, Doumerc N, Mallet R, Sallusto F, et al. Radical cystectomy for bladder cancer: morbidity of laparoscopic versus open surgery. J Urol 2009;181(2):554-9
18. Haber GPRF, Cathelineau X, Barret E, Vallancien G, Piechaud T, Gaston R, et al. Le registre international des cystectomies laparoscopiques : à propos de 492 cas. Prog Urol 2006;16(1):40A.
19. Zerbib M., Bouchot O : surveillance post-thérapeutique des tumeurs infiltrantes DE la vessie. Rapport DU congrès afu 2002. prog. urol 2002 ;12(5) :1135-1136.
20. Canion R, Seigne J. Surgical management of bladder carcinoma. Cancer control 2002; 9; (4): 284-292.
21. Chang SS, Cookson MS, Baumgartner RG , Wells N, Smith Jr JA. Analysis of early complications after radical cystectomy: results of a collaborative care pathway. J Urol 2002;167 (5):2012-6.
22. Peyromaure M, Florent G, Bernard D, Marc Z. Surgical management of infiltrating bladder cancer in elderly patients. Eur Urol 2004;45 (2):147-53.

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